

Acuron Weed Control and Corn Tolerance

Trial ID: 15ACURON Location: Western Branch Big E Trial Year: 2015
 Protocol ID: 15ACURON Investigator: Dr. Mark M. Loux
 Project ID: HBI001B3-2015US Study Director: Anthony Dobbels
 Sponsor Contact: Dain Bruns, Syngenta

General Trial Information

Study Director: Anthony Dobbels
Investigator: Dr. Mark M. Loux

Trial Location

City: South Charleston **Country:** USA United States
State/Prov.: Ohio
Postal Code: 45368 **Climate Zone:** USWARM US Warm Continental

Latitude of LL Corner °: 39.85796 N
Longitude of LL Corner °: -83.66996 W

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Anthony Dobbels

Investigator: Dr. Mark M. Loux

Crop Description

Crop 1: ZEAMX Zea mays
Variety: SCS 1105 AM
Description: Seed Consultants RR / LL

Corn

Planting Rate, Unit: 32097 S/A
Depth, Unit: 2 IN
Row Spacing, Unit: 30 IN
Soil Temperature, Unit: 60 F
Soil Moisture: NORMAL normal, adequate
Seed Bed: MEDIUM medium

Planting Date: 5-3-2015
Planting Method: PLANTD planted
Planting Equipment: FPP Finger Pickup Planter
Emergence Date: 5-8-2015

Pest Description

Pest 1 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail

Pest 2 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed

Pest 3 Type: W **Code:** AMARE Amaranthus retroflexus
Common Name: Redroot pigweed

Pest 4 Type: W **Code:** CHEAL Chenopodium album
Common Name: Common lambsquarters

Pest 5 Type: W **Code:** IPOHE Ipomoea hederacea
Common Name: Ivyleaf morningglory

Pest 6 Type: W **Code:** ABUTH Abutilon theophrasti
Common Name: velvetleaf

Pest 7 Type: W **Code:** SOLPT Solanum ptycanthum
Common Name: Eastern black nightshade

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT2 **Treatments:** 12
Replications: 4

Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: CONTIL conventional-till
Study Design: RACOB Randomized Complete Block (RCB)

No. Previous Crop Year

1. Soybean 2014

Soil Description

Description Name: Big E

% OM: 2.8

pH: 5.9

CEC: 17.44

Texture: SIL silt loam

Soil Name: Kokomo

Fert. Level: G good

Soil Drainage: G good

Additional Measured Elements

Date	Element	Quantity	Unit
4-24-2015	NH3	180	LBS

Application Description

	A	B
Application Date:	5-4-2015	5-28-2015
Appl. Start Time:	11:00 AM	8:50 AM
Appl. Stop Time:	11:20 AM	9:10 AM
Application Method:	SPRAY	SPRAY
Application Timing:	PRE	POST
Application Placement:	BROSOI	BROFOL
Applied By:	Bethel	Dobbels
Air Temperature, Unit:	73 F	69 F
% Relative Humidity:	45	75
Wind Velocity, Unit:	10 MPH	2.5 MPH
Wind Direction:	SW	E
Dew Presence (Y/N):	N no	
Soil Temperature, Unit:	58 F	66 F
Soil Moisture:	DRY	Dry/moist
% Cloud Cover:	40	60
Next Moisture Occurred On:	5-5-2015	5-30-2015
Time to Next Moisture, Unit:	14 HR	2 DAY

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:		BBCH
Stage Majority, Percent:		14 100
Height, Unit:		11 IN
Height Minimum, Maximum:		11 12

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	SETFA W	SETFA W
Stage Majority, Percent:		13 100
Stage Minimum, Percent:		12 100
Stage Maximum, Percent:		13 100
Height, Unit:		5 IN
Height Minimum, Maximum:		2 7
Density, Unit:	111 M2	25 M2
Pest 2 Code, Type, Scale:	AMBTR W	AMBTR W
Stage Majority, Percent:		16 100
Stage Minimum, Percent:		16 100
Stage Maximum, Percent:		18 100
Height, Unit:		4 IN
Height Minimum, Maximum:		3 6
Density, Unit:	6 m2	6 M2
Pest 3 Code, Type, Scale:	AMARE W	AMARE W
Stage Majority, Percent:		14 100
Stage Minimum, Percent:		14 100
Stage Maximum, Percent:		16 100
Height, Unit:		1.5 IN
Height Minimum, Maximum:		1 3
Density, Unit:	5 M2	1 M2
Pest 4 Code, Type, Scale:	CHEAL W	CHEAL W
Stage Majority, Percent:		18 100
Stage Minimum, Percent:		16 100
Stage Maximum, Percent:		18 100
Height, Unit:		2 IN
Height Minimum, Maximum:		1 3
Density, Unit:	5 M2	5 M2
Pest 5 Code, Type, Scale:	IPOHE W	IPOHE W
Stage Majority, Percent:		10 100
Stage Minimum, Percent:		10 100
Stage Maximum, Percent:		10 100
Height, Unit:		1.5 IN
Height Minimum, Maximum:		1 2
Density, Unit:	1 M2	1 M2
Pest 6 Code, Type, Scale:	ABUTH W	ABUTH W
Stage Majority, Percent:		14 100
Stage Minimum, Percent:		14 100
Stage Maximum, Percent:		16 100
Height, Unit:		2 IN
Height Minimum, Maximum:		2 5
Density, Unit:	1 M2	1 M2
Pest 7 Code, Type, Scale:	SOLPT W	SOLPT W
Stage Majority, Percent:		12 100
Stage Minimum, Percent:		12 100
Stage Maximum, Percent:		12 100
Height, Unit:		0.5 IN
Height Minimum, Maximum:		0.25 0.5
Density, Unit:	4 M2	4 M2

Application Equipment

	A	B
Appl. Equipment:	6 FOOT BOOM	10' AI XR
Equipment Type:	SPRBAC	SPRBAC
Operation Pressure, Unit:	46 PSI	46 PSI
Nozzle Type:	AI XR	AI XR
Nozzle Size:	110015	110015
Nozzle Spacing, Unit:	18 IN	18 IN
Boom Length, Unit:	6.67 FT	10 FT
Boom Height, Unit:	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	15 GPA	15 GPA
Mix Size, Unit:	2 Liters	2 Liters
Propellant:	CO2	CO2

Acuron Weed Control and Corn Tolerance

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Pest Type		W Weed	W Weed	W Weed
Pest Code		SETFA	AMBTR	CHEAL
Pest Scientific Name		Setaria faberi	Ambrosia trifi>	Chenopodium al>
Pest Name		Giant foxtail	Giant ragweed	Common lambsqu>
Crop Code	ZEAMX			
BBCH Scale	BCOR			
Crop Scientific Name	Zea mays			
Crop Name	Corn			
Rating Date	5-28-2015	5-28-2015	5-28-2015	5-28-2015
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	24 24	24 24	24 24	24 24
Trt-Eval Interval	AT POST	AT POST	AT POST	AT POST
Plant-Eval Interval	25 DP-1	25 DP-1	25 DP-1	25 DP-1
Days After Emergence	20 DE-1	20 DE-1	20 DE-1	20 DE-1
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Appl Code	Appl Description	1	2	3	4
1	UTC						0 a	0 e	0 c	0 b
2	Acuron	3 qt/a		A		PRE	0 a	81 a-d	78 ab	93 a
3	Acuron	3 qt/a		A		PRE	0 a	87 abc	88 a	92 a
3	AAtrex	1 qt/a		A		PRE				
4	Acuron	3 qt/a		A		PRE	0 a	93 ab	79 ab	100 a
4	Touchdown Total	30 oz/a		B		POST				
4	Status	5 oz/a		B		POST				
4	N PAK AMS	48 oz/a		B		POST				
5	Anthem ATZ	2.5 pt/a		A		PRE	0 a	78 bcd	68 b	85 a
6	Surestart II	3 pt/a		A		PRE	0 a	95 a	70 b	93 a
7	Verdict	18 oz/a		A		PRE	0 a	93 ab	78 ab	100 a
8	Corvus	5.6 oz/a		A		PRE	0 a	70 d	70 b	93 a
9	Cinch ATZ	2 qt/a		A		PRE	0 a	95 a	80 ab	93 a
9	INSTIGATE 4 OZ									
9	Rimsulfuron	1 oz/a		A		PRE				
9	Mesotrione	5 oz/a		A		PRE				
10	Acuron	1.5 qt/a		A		PRE	0 a	79 bcd	71 b	93 a
10	Acuron	1.5 qt/a		B		POST				
10	NIS	4.8 oz/a		B		POST				
10	N PAK AMS	48 oz/a		B		POST				
11	Acuron	1.5 qt/a		A		PRE	0 a	77 bcd	71 b	85 a
11	Halex GT	3.6 pt/a		B		POST				
11	NIS	4.8 oz/a		B		POST				
11	N PAK AMS	48 oz/a		B		POST				

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 Missing data estimates are included in columns: Yates=12,14
 Could not calculate LSD (% mean diff) for columns 1,5,15,22 because error mean square = 0.

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Pest Type		W Weed	W Weed	W Weed
Pest Code		SETFA	AMBTR	CHEAL
Pest Scientific Name		Setaria faberi	Ambrosia trifi>	Chenopodium al>
Pest Name		Giant foxtail	Giant ragweed	Common lambsqu>
Crop Code	ZEAMX			
BBCH Scale	BCOR			
Crop Scientific Name	Zea mays			
Crop Name	Corn			
Rating Date	5-28-2015	5-28-2015	5-28-2015	5-28-2015
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	24 24	24 24	24 24	24 24
Trt-Eval Interval	AT POST	AT POST	AT POST	AT POST
Plant-Eval Interval	25 DP-1	25 DP-1	25 DP-1	25 DP-1
Days After Emergence	20 DE-1	20 DE-1	20 DE-1	20 DE-1
Number of Decimals	0	0	0	0

Trt Treatment	Other Other	Appl Appl					
No. Name	Rate Rate	Unit Code	Description	1	2	3	4
12 Acuron	2 qt/a	A	PRE	0 a	73 cd	71 b	85 a
12 Touchdown Total	30 oz/a	B	POST				
12 N PAK AMS	48 oz/a	B	POST				
LSD P=.05				.	15.6	13.0	15.6
Standard Deviation				0.0	10.8	9.0	10.9
CV				0.0	14.12	13.16	12.9
Grand Mean				0.0	76.6	68.5	84.1
Bartlett's X2				0.0	4.167	21.904	0.243
P(Bartlett's X2)				.	0.90	0.009*	1.00
Skewness				.	-1.7857*	-1.9364*	-2.1491*
Kurtosis				.	3.337*	4.5589*	4.0243*
Replicate F				0.000	3.805	3.500	8.068
Replicate Prob(F)				1.0000	0.0190	0.0262	0.0004
Treatment F				0.000	22.532	24.494	24.706
Treatment Prob(F)				1.0000	0.0001	0.0001	0.0001

Pest Type	W Weed	W Weed	W Weed	
Pest Code	AMARE	ABUTH	POLPY	
Pest Scientific Name	Amaranthus ret>	Abutilon theop>	Persicaria pen>	
Pest Name	Redroot pigweed	velvetleaf	Pennsylvania s>	
Crop Code				ZEAMX
BBCH Scale				BCOR
Crop Scientific Name				Zea mays
Crop Name				Corn
Rating Date	5-28-2015	5-28-2015	5-28-2015	6-10-2015
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	24 24	24 24	24 24	37 13
Trt-Eval Interval	AT POST	AT POST	AT POST	13 DA-B
Plant-Eval Interval	25 DP-1	25 DP-1	25 DP-1	38 DP-1
Days After Emergence	20 DE-1	20 DE-1	20 DE-1	33 DE-1
Number of Decimals	0	0	0	0

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Appl Code	Appl Description	5	6	7	8
1	UTC						0 b	0 b	0 b	0 e
2	Acuron	3 qt/a		A		PRE	100 a	100 a	93 a	2 bcd
3	Acuron	3 qt/a		A		PRE	100 a	100 a	100 a	1 cd
3	AAtrex	1 qt/a		A		PRE				
4	Acuron	3 qt/a		A		PRE	100 a	100 a	100 a	2 bc
4	Touchdown Total	30 oz/a		B		POST				
4	Status	5 oz/a		B		POST				
4	N PAK AMS	48 oz/a		B		POST				
5	Anthem ATZ	2.5 pt/a		A		PRE	100 a	93 a	100 a	1 d
6	Surestart II	3 pt/a		A		PRE	100 a	93 a	100 a	1 cd
7	Verdict	18 oz/a		A		PRE	100 a	100 a	100 a	1 cd
8	Corvus	5.6 oz/a		A		PRE	100 a	100 a	100 a	1 d
9	Cinch ATZ	2 qt/a		A		PRE	100 a	100 a	93 a	1 d
9	INSTIGATE 4 OZ									
9	Rimsulfuron	1 oz/a		A		PRE				
9	Mesotrione	5 oz/a		A		PRE				
10	Acuron	1.5 qt/a		A		PRE	100 a	93 a	93 a	2 ab
10	Acuron	1.5 qt/a		B		POST				
10	NIS	4.8 oz/a		B		POST				
10	N PAK AMS	48 oz/a		B		POST				
11	Acuron	1.5 qt/a		A		PRE	100 a	93 a	100 a	3 a
11	Halex GT	3.6 pt/a		B		POST				
11	NIS	4.8 oz/a		B		POST				
11	N PAK AMS	48 oz/a		B		POST				

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Pest Type	W Weed	W Weed	W Weed	
Pest Code	AMARE	ABUTH	POLPY	
Pest Scientific Name	Amaranthus ret>	Abutilon theop>	Persicaria pen>	
Pest Name	Redroot pigweed	velvetleaf	Pennsylvania s>	
Crop Code				ZEAMX
BBCH Scale				BCOR
Crop Scientific Name				Zea mays
Crop Name				Corn
Rating Date	5-28-2015	5-28-2015	5-28-2015	6-10-2015
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	24 24	24 24	24 24	37 13
Trt-Eval Interval	AT POST	AT POST	AT POST	13 DA-B
Plant-Eval Interval	25 DP-1	25 DP-1	25 DP-1	38 DP-1
Days After Emergence	20 DE-1	20 DE-1	20 DE-1	33 DE-1
Number of Decimals	0	0	0	0
Trt Treatment	Other	Other	Appl	Appl
No. Name	Rate	Rate	Unit	Code
				Description
				5
				6
				7
				8
12 Acuron	2 qt/a		A	PRE
12 Touchdown Total	30 oz/a		B	POST
12 N PAK AMS	48 oz/a		B	POST
LSD P=.05	.			14.1
Standard Deviation	0.0			9.8
CV	0.0			11.1
Grand Mean	91.7			88.5
Bartlett's X2	0.0			12.317
P(Bartlett's X2)	.			0.031*
Skewness	-3.1133*			-2.6353*
Kurtosis	8.0253*			5.8453*
Replicate F	0.000			0.670
Replicate Prob(F)	1.0000			0.5764
Treatment F	0.000			32.768
Treatment Prob(F)	1.0000			0.0001
				1.348
				4.786
				0.2756
				0.0071
				43.848
				6.313
				0.0001
				0.0001

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	CHEAL	AMARE	SETFA	ABUTH
Pest Scientific Name	Chenopodium al	Amaranthus ret	Setaria faberi	Abutilon theop
Pest Name	Common lambsqu	Redroot pigweed	Giant foxtail	velvetleaf
Crop Code				
BBCH Scale				
Crop Scientific Name				
Crop Name				
Rating Date	6-10-2015	6-10-2015	6-10-2015	6-10-2015
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	37 13	37 13	37 13	37 13
Trt-Eval Interval	13 DA-B	13 DA-B	13 DA-B	13 DA-B
Plant-Eval Interval	38 DP-1	38 DP-1	38 DP-1	38 DP-1
Days After Emergence	33 DE-1	33 DE-1	33 DE-1	33 DE-1
Number of Decimals	0	0	0	0

Trt Treatment	Other Rate	Other Rate	Appl Unit	Appl Code	9	10	11	12
1 UTC					0 d	0 c	0 e	0 c
2 Acuron	3 qt/a		A	PRE	89 a	100 a	78 bc	90 a
3 Acuron	3 qt/a		A	PRE	83 ab	100 a	81 b	100 a
3 AAtrex	1 qt/a		A	PRE				
4 Acuron	3 qt/a		A	PRE	100 a	100 a	100 a	100 a
4 Touchdown Total	30 oz/a		B	POST				
4 Status	5 oz/a		B	POST				
4 N PAK AMS	48 oz/a		B	POST				
5 Anthem ATZ	2.5 pt/a		A	PRE	53 c	100 a	70 cd	58 b
6 Surestart II	3 pt/a		A	PRE	68 bc	100 a	93 a	58 b
7 Verdict	18 oz/a		A	PRE	69 bc	100 a	74 bcd	82 a
8 Corvus	5.6 oz/a		A	PRE	55 c	98 b	69 d	87 a
9 Cinch ATZ	2 qt/a		A	PRE	83 ab	100 a	80 b	95 a
9 INSTIGATE 4 OZ								
9 Rimsulfuron	1 oz/a		A	PRE				
9 Mesotrione	5 oz/a		A	PRE				
10 Acuron	1.5 qt/a		A	PRE	100 a	100 a	94 a	100 a
10 Acuron	1.5 qt/a		B	POST				
10 NIS	4.8 oz/a		B	POST				
10 N PAK AMS	48 oz/a		B	POST				
11 Acuron	1.5 qt/a		A	PRE	100 a	100 a	100 a	100 a
11 Hallex GT	3.6 pt/a		B	POST				
11 NIS	4.8 oz/a		B	POST				
11 N PAK AMS	48 oz/a		B	POST				

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Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	CHEAL	AMARE	SETFA	ABUTH
Pest Scientific Name	Chenopodium al	Amaranthus ret	Setaria faberi	Abutilon theop
Pest Name	Common lambsqu	Redroot pigweed	Giant foxtail	velvetleaf
Crop Code				
BBCH Scale				
Crop Scientific Name				
Crop Name				
Rating Date	6-10-2015	6-10-2015	6-10-2015	6-10-2015
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	37 13	37 13	37 13	37 13
Trt-Eval Interval	13 DA-B	13 DA-B	13 DA-B	13 DA-B
Plant-Eval Interval	38 DP-1	38 DP-1	38 DP-1	38 DP-1
Days After Emergence	33 DE-1	33 DE-1	33 DE-1	33 DE-1
Number of Decimals	0	0	0	0

Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit	Appl Code Description	9	10	11	12
12 Acuron	2 qt/a		A	PRE	99 a	100 a	100 a	100 a
12 Touchdown Total	30 oz/a		B	POST				
12 N PAK AMS	48 oz/a		B	POST				
LSD P=.05					18.6	2.1	8.0	18.5
Standard Deviation					12.9	1.4	5.5	12.8
CV					17.27	1.58	7.08	15.81
Grand Mean					74.7	91.5	78.1	80.8
Bartlett's X2					9.653	0.0	5.282	5.219
P(Bartlett's X2)					0.209	.	0.626	0.39
Skewness					-1.1937*	-3.0993*	-1.9865*	-1.7285*
Kurtosis					0.5951	7.9662*	3.786*	1.7935*
Replicate F					3.644	1.000	5.026	2.100
Replicate Prob(F)					0.0225	0.4051	0.0056	0.1220
Treatment F					20.480	1593.727	97.319	21.599
Treatment Prob(F)					0.0001	0.0001	0.0001	0.0001

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBTR	IPOHE	AMBTR	SETFA
Pest Scientific Name	Ambrosia trifida>	Ipomoea hederacea>	Ambrosia trifida>	Setaria faberii
Pest Name	Giant ragweed	Ivyleaf mornin>	Giant ragweed	Giant foxtail
Crop Code			ZEAMX	
BBCH Scale			BCOR	
Crop Scientific Name			Zea mays	
Crop Name			Corn	
Rating Date	6-10-2015	6-10-2015	6-29-2015	6-29-2015
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	37 13	37 13	56 32	56 32
Trt-Eval Interval	13 DA-B	13 DA-B	32 DA-B	32 DA-B
Plant-Eval Interval	38 DP-1	38 DP-1	57 DP-1	57 DP-1
Days After Emergence	33 DE-1	33 DE-1	52 DE-1	52 DE-1
Number of Decimals	0	0	0	0

Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit	Appl Code Description	13	14	15	16	17
1 UTC					0 e	0 c	0 a	0 f	0 f
2 Acuron	3 qt/a		A	PRE	63 bc	84 ab	0 a	66 cd	76 cde
3 Acuron	3 qt/a		A	PRE	76 ab	89 ab	0 a	76 bc	76 cde
3 AAtrex	1 qt/a		A	PRE					
4 Acuron	3 qt/a		A	PRE	86 a	100 a	0 a	85 ab	96 a
4 Touchdown Total	30 oz/a		B	POST					
4 Status	5 oz/a		B	POST					
4 N PAK AMS	48 oz/a		B	POST					
5 Anthem ATZ	2.5 pt/a		A	PRE	40 d	84 ab	0 a	48 e	73 de
6 Surestart II	3 pt/a		A	PRE	50 cd	72 b	0 a	50 de	85 a-d
7 Verdict	18 oz/a		A	PRE	60 bc	98 a	0 a	63 cde	80 b-e
8 Corvus	5.6 oz/a		A	PRE	54 cd	94 a	0 a	63 cde	68 e
9 Cinch ATZ	2 qt/a		A	PRE	61 bc	92 ab	0 a	60 cde	73 de
9 INSTIGATE 4 OZ									
9 Rimsulfuron	1 oz/a		A	PRE					
9 Mesotrione	5 oz/a		A	PRE					
10 Acuron	1.5 qt/a		A	PRE	91 a	93 ab	0 a	91 ab	94 ab
10 Acuron	1.5 qt/a		B	POST					
10 NIS	4.8 oz/a		B	POST					
10 N PAK AMS	48 oz/a		B	POST					
11 Acuron	1.5 qt/a		A	PRE	91 a	100 a	0 a	99 a	100 a
11 Halex GT	3.6 pt/a		B	POST					
11 NIS	4.8 oz/a		B	POST					
11 N PAK AMS	48 oz/a		B	POST					

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Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBTR	IPOHE	AMBTR	SETFA
Pest Scientific Name	Ambrosia trifida>	Ipomoea hederacea>	Ambrosia trifida>	Setaria faberii
Pest Name	Giant ragweed	Ivyleaf mornin>	Giant ragweed	Giant foxtail
Crop Code			ZEAMX	
BBCH Scale			BCOR	
Crop Scientific Name			Zea mays	
Crop Name			Corn	
Rating Date	6-10-2015	6-10-2015	6-29-2015	6-29-2015
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	37 13	37 13	56 32	56 32
Trt-Eval Interval	13 DA-B	13 DA-B	32 DA-B	32 DA-B
Plant-Eval Interval	38 DP-1	38 DP-1	57 DP-1	57 DP-1
Days After Emergence	33 DE-1	33 DE-1	52 DE-1	52 DE-1
Number of Decimals	0	0	0	0

Trt Treatment No. Name	Other Rate	Other Rate	Appl Unit	Appl Code Description	13	14	15	16	17
12 Acuron	2 qt/a		A	PRE	88 a	93 ab	0 a	88 ab	91 abc
12 Touchdown Total	30 oz/a		B	POST					
12 N PAK AMS	48 oz/a		B	POST					
LSD P=.05					17.9	21.0	.	16.7	15.4
Standard Deviation					12.4	14.6	0.0	11.6	10.7
CV					19.6	17.52	0.0	17.71	14.07
Grand Mean					63.3	83.1	0.0	65.6	75.9
Bartlett's X2					12.624	14.415	0.0	13.707	6.84
P(Bartlett's X2)					0.245	0.072	.	0.133	0.654
Skewness					-0.791*	-2.0777*	.	-0.8497*	-1.8198*
Kurtosis					-0.135	3.3302*	.	0.4345	3.0394*
Replicate F					4.175	0.660	0.000	2.391	1.757
Replicate Prob(F)					0.0130	0.5830	1.0000	0.0863	0.1747
Treatment F					18.120	14.098	0.000	20.604	23.902
Treatment Prob(F)					0.0001	0.0001	1.0000	0.0001	0.0001

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	CHEAL	ABUTH	AMARE	IPOHE
Pest Scientific Name	Chenopodium al>	Abutilon theop>	Amaranthus ret>	Ipomoea heder>
Pest Name	Common lambsqu>	velvetleaf	Redroot pigweed	Ivyleaf mornin>
Crop Code				
BBCH Scale				
Crop Scientific Name				
Crop Name				
Rating Date	6-29-2015	6-29-2015	6-29-2015	6-29-2015
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	56 32	56 32	56 32	56 32
Trt-Eval Interval	32 DA-B	32 DA-B	32 DA-B	32 DA-B
Plant-Eval Interval	57 DP-1	57 DP-1	57 DP-1	57 DP-1
Days After Emergence	52 DE-1	52 DE-1	52 DE-1	52 DE-1
Number of Decimals	0	0	0	0

Trt Treatment	Other Rate	Other Rate	Appl Unit	Appl Description	18	19	20	21
1 UTC					0 e	0 d	0 b	0 b
2 Acuron	3 qt/a		A	PRE	96 ab	100 a	100 a	85 a
3 Acuron	3 qt/a		A	PRE	93 ab	95 ab	100 a	88 a
3 AAtrex	1 qt/a		A	PRE				
4 Acuron	3 qt/a		A	PRE	100 a	100 a	100 a	99 a
4 Touchdown Total	30 oz/a		B	POST				
4 Status	5 oz/a		B	POST				
4 N PAK AMS	48 oz/a		B	POST				
5 Anthem ATZ	2.5 pt/a		A	PRE	73 cd	71 c	100 a	85 a
6 Surestart II	3 pt/a		A	PRE	83 bc	84 bc	100 a	83 a
7 Verdict	18 oz/a		A	PRE	86 abc	94 ab	100 a	100 a
8 Corvus	5.6 oz/a		A	PRE	68 d	93 ab	100 a	90 a
9 Cinch ATZ	2 qt/a		A	PRE	88 ab	94 ab	100 a	100 a
9 INSTIGATE 4 OZ								
9 Rimsulfuron	1 oz/a		A	PRE				
9 Mesotrione	5 oz/a		A	PRE				
10 Acuron	1.5 qt/a		A	PRE	100 a	100 a	100 a	93 a
10 Acuron	1.5 qt/a		B	POST				
10 NIS	4.8 oz/a		B	POST				
10 N PAK AMS	48 oz/a		B	POST				
11 Acuron	1.5 qt/a		A	PRE	100 a	100 a	100 a	100 a
11 Halex GT	3.6 pt/a		B	POST				
11 NIS	4.8 oz/a		B	POST				
11 N PAK AMS	48 oz/a		B	POST				

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Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	CHEAL	ABUTH	AMARE	IPOHE
Pest Scientific Name	Chenopodium al>	Abutilon theop>	Amaranthus ret>	Ipomoea hedera>
Pest Name	Common lambsqu>	velvetleaf	Redroot pigweed	Ivyleaf mornin>
Crop Code				
BBCH Scale				
Crop Scientific Name				
Crop Name				
Rating Date	6-29-2015	6-29-2015	6-29-2015	6-29-2015
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	56 32	56 32	56 32	56 32
Trt-Eval Interval	32 DA-B	32 DA-B	32 DA-B	32 DA-B
Plant-Eval Interval	57 DP-1	57 DP-1	57 DP-1	57 DP-1
Days After Emergence	52 DE-1	52 DE-1	52 DE-1	52 DE-1
Number of Decimals	0	0	0	0

Trt Treatment	Other Other	Appl Appl					
No. Name	Rate Rate	Unit Code	Description	18	19	20	21
12 Acuron	2 qt/a	A	PRE	98 a	100 a	100 a	98 a
12 Touchdown Total	30 oz/a	B	POST				
12 N PAK AMS	48 oz/a	B	POST				
LSD P=.05				14.3	14.5	0.6	21.1
Standard Deviation				10.0	10.1	0.4	14.7
CV				12.16	11.73	0.45	17.27
Grand Mean				81.8	85.8	91.6	84.9
Bartlett's X2				22.801	3.703	0.0	17.324
P(Bartlett's X2)				0.004*	0.593	.	0.015*
Skewness				-2.0325*	-2.3305*	-3.1121*	-2.1699*
Kurtosis				3.6176*	4.5723*	8.0207*	3.6955*
Replicate F				0.920	0.507	0.647	0.662
Replicate Prob(F)				0.4421	0.6803	0.5904	0.5816
Treatment F				31.514	31.711	19377.355	14.109
Treatment Prob(F)				0.0001	0.0001	0.0001	0.0001

Pest Type		W Weed	W Weed	W Weed	W Weed
Pest Code		AMBTR	SETFA	IPOHE	ABUTH
Pest Scientific Name		Ambrosia trifi>	Setaria faberi	Ipomoea heder>	Abutilon theop>
Pest Name		Giant ragweed	Giant foxtail	Ivyleaf mornin>	velvetleaf
Crop Code	ZEAMX				
BBCH Scale	BCOR				
Crop Scientific Name	Zea mays				
Crop Name	Corn				
Rating Date	7-23-2015	7-23-2015	7-23-2015	7-23-2015	7-23-2015
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	80 56	80 56	80 56	80 56	80 56
Trt-Eval Interval	56 DA-B	56 DA-B	56 DA-B	56 DA-B	56 DA-B
Plant-Eval Interval	81 DP-1	81 DP-1	81 DP-1	81 DP-1	81 DP-1
Days After Emergence	76 DE-1	76 DE-1	76 DE-1	76 DE-1	76 DE-1
Number of Decimals	0	0	0	0	0

Trt Treatment	Other Rate	Other Rate	Appl Unit	Appl Description	22	23	24	25	26
1 UTC					0 a	0 g	0 f	0 c	0 c
2 Acuron	3 qt/a		A	PRE	0 a	69 cd	69 e	83 ab	98 a
3 Acuron	3 qt/a		A	PRE	0 a	78 bc	71 de	90 ab	100 a
3 AAtrex	1 qt/a		A	PRE					
4 Acuron	3 qt/a		A	PRE	0 a	89 ab	96 a	98 ab	100 a
4 Touchdown Total	30 oz/a		B	POST					
4 Status	5 oz/a		B	POST					
4 N PAK AMS	48 oz/a		B	POST					
5 Anthem ATZ	2.5 pt/a		A	PRE	0 a	48 f	76 cde	80 b	83 b
6 Surestart II	3 pt/a		A	PRE	0 a	55 ef	84 bc	83 ab	100 a
7 Verdict	18 oz/a		A	PRE	0 a	61 de	81 cd	100 a	98 a
8 Corvus	5.6 oz/a		A	PRE	0 a	50 ef	66 e	100 a	100 a
9 Cinch ATZ	2 qt/a		A	PRE	0 a	61 de	75 cde	98 ab	99 a
9 INSTIGATE 4 OZ									
9 Rimsulfuron	1 oz/a		A	PRE					
9 Mesotrione	5 oz/a		A	PRE					
10 Acuron	1.5 qt/a		A	PRE	0 a	90 ab	94 ab	98 ab	100 a
10 Acuron	1.5 qt/a		B	POST					
10 NIS	4.8 oz/a		B	POST					
10 N PAK AMS	48 oz/a		B	POST					
11 Acuron	1.5 qt/a		A	PRE	0 a	96 a	100 a	100 a	100 a
11 Halex GT	3.6 pt/a		B	POST					
11 NIS	4.8 oz/a		B	POST					
11 N PAK AMS	48 oz/a		B	POST					

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Pest Type		W Weed	W Weed	W Weed	W Weed
Pest Code		AMBTR	SETFA	IPOHE	ABUTH
Pest Scientific Name		Ambrosia trifi>	Setaria faberi	Ipomoea heder>	Abutilon theop>
Pest Name		Giant ragweed	Giant foxtail	Ivyleaf mornin>	velvetleaf
Crop Code	ZEAMX				
BBCH Scale	BCOR				
Crop Scientific Name	Zea mays				
Crop Name	Corn				
Rating Date	7-23-2015	7-23-2015	7-23-2015	7-23-2015	7-23-2015
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	80 56	80 56	80 56	80 56	80 56
Trt-Eval Interval	56 DA-B	56 DA-B	56 DA-B	56 DA-B	56 DA-B
Plant-Eval Interval	81 DP-1	81 DP-1	81 DP-1	81 DP-1	81 DP-1
Days After Emergence	76 DE-1	76 DE-1	76 DE-1	76 DE-1	76 DE-1
Number of Decimals	0	0	0	0	0

Trt Treatment	Other	Other	Appl	Appl						
No. Name	Rate	Rate	Unit	Code	Description	22	23	24	25	26
12 Acuron	2 qt/a		A	PRE		0 a	85 ab	93 ab	100 a	100 a
12 Touchdown Total	30 oz/a		B	POST						
12 N PAK AMS	48 oz/a		B	POST						
LSD P=.05						.	13.5	10.6	18.6	9.2
Standard Deviation						0.0	9.4	7.4	12.9	6.4
CV						0.0	14.4	9.76	15.08	7.1
Grand Mean						0.0	65.1	75.4	85.6	89.7
Bartlett's X2						0.0	6.289	6.559	14.215	14.027
P(Bartlett's X2)						.	0.711	0.683	0.027*	0.003*
Skewness						.	-0.9521*	-1.916*	-2.2219*	-2.8202*
Kurtosis						.	0.6979	3.5503*	4.0337*	6.616*
Replicate F						0.000	1.681	1.769	0.146	0.869
Replicate Prob(F)						1.0000	0.1901	0.1722	0.9317	0.4668
Treatment F						0.000	31.526	51.049	18.869	81.112
Treatment Prob(F)						1.0000	0.0001	0.0001	0.0001	0.0001

Pest Type	W Weed	W Weed
Pest Code	CHEAL	AMARE
Pest Scientific Name	Chenopodium al>	Amaranthus ret>
Pest Name	Common lambsqu>	Redroot pigweed
Crop Code		
BBCH Scale		
Crop Scientific Name		
Crop Name		
Rating Date	7-23-2015	7-23-2015
Rating Type	CONTRO	CONTRO
Rating Unit	%	%
Number of Subsamples	1	1
Days After First/Last Applic.	80 56	80 56
Trt-Eval Interval	56 DA-B	56 DA-B
Plant-Eval Interval	81 DP-1	81 DP-1
Days After Emergence	76 DE-1	76 DE-1
Number of Decimals	0	0

Trt No.	Treatment Name	Other Rate	Other Rate	Appl Unit	Appl Code	Appl Description	27	28
1	UTC						0 c	0 c
2	Acuron	3 qt/a		A		PRE	78 b	99 b
3	Acuron	3 qt/a		A		PRE	96 a	100 a
3	AAtrex	1 qt/a		A		PRE		
4	Acuron	3 qt/a		A		PRE	99 a	100 a
4	Touchdown Total	30 oz/a		B		POST		
4	Status	5 oz/a		B		POST		
4	N PAK AMS	48 oz/a		B		POST		
5	Anthem ATZ	2.5 pt/a		A		PRE	83 ab	100 a
6	Surestart II	3 pt/a		A		PRE	88 ab	100 a
7	Verdict	18 oz/a		A		PRE	85 ab	100 a
8	Corvus	5.6 oz/a		A		PRE	75 b	100 a
9	Cinch ATZ	2 qt/a		A		PRE	99 a	100 a
9	INSTIGATE 4 OZ							
9	Rimsulfuron	1 oz/a		A		PRE		
9	Mesotrione	5 oz/a		A		PRE		
10	Acuron	1.5 qt/a		A		PRE	100 a	100 a
10	Acuron	1.5 qt/a		B		POST		
10	NIS	4.8 oz/a		B		POST		
10	N PAK AMS	48 oz/a		B		POST		
11	Acuron	1.5 qt/a		A		PRE	100 a	100 a
11	Halex GT	3.6 pt/a		B		POST		
11	NIS	4.8 oz/a		B		POST		
11	N PAK AMS	48 oz/a		B		POST		

Pest Type	W Weed	W Weed
Pest Code	CHEAL	AMARE
Pest Scientific Name	Chenopodium al>	Amaranthus ret>
Pest Name	Common lambsqu>	Redroot pigweed
Crop Code		
BBCH Scale		
Crop Scientific Name		
Crop Name		
Rating Date	7-23-2015	7-23-2015
Rating Type	CONTRO	CONTRO
Rating Unit	%	%
Number of Subsamples	1	1
Days After First/Last Applic.	80 56	80 56
Trt-Eval Interval	56 DA-B	56 DA-B
Plant-Eval Interval	81 DP-1	81 DP-1
Days After Emergence	76 DE-1	76 DE-1
Number of Decimals	0	0

Trt No.	Treatment Name	Other Rate	Other Rate	Unit	Appl Code	Appl Description	27	28
12	Acuron	2 qt/a			A	PRE	98 a	100 a
12	Touchdown Total	30 oz/a			B	POST		
12	N PAK AMS	48 oz/a			B	POST		

LSD P=.05	17.9	1.0
Standard Deviation	12.5	0.7
CV	14.98	0.79
Grand Mean	83.2	91.6
Bartlett's X2	23.874	0.0
P(Bartlett's X2)	0.002*	.
Skewness	-2.0714*	-3.1096*
Kurtosis	3.5178*	8.0106*

Replicate F	1.022	1.000
Replicate Prob(F)	0.3955	0.4051
Treatment F	19.807	6386.455
Treatment Prob(F)	0.0001	0.0001

Acuron Weed Control and Corn Tolerance

Trial ID: 15ACURON	Location: Western Branch Big E	Trial Year: 2015
Protocol ID: 15ACURON	Investigator: Dr. Mark M. Loux	
Project ID: HBI001B3-2015US	Study Director: Anthony Dobbels	
	Sponsor Contact: Dain Bruns, Syngenta	

Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

SETFA, Setaria faberi, = US
 AMBTR, Ambrosia trifida, = US
 CHEAL, Chenopodium album, = US
 AMARE, Amaranthus retroflexus, = US
 ABUTH, Abutilon theophrasti, = US
 POLPY, Persicaria pensylvanica, = US
 IPOHE, Ipomoea hederacea, = US

Crop Code

ZEAMX, BCOR, Zea mays, = US

Rating Type

PHYGEN = phytotoxicity - general / injury
 CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

25 DP-1 = 1 ZEAMX 5-3-2015
 38 DP-1 = 1 ZEAMX 5-3-2015
 57 DP-1 = 1 ZEAMX 5-3-2015
 81 DP-1 = 1 ZEAMX 5-3-2015